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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/056,667	10/29/2001	Jennie S. Hwang	RJM 2 0062	1009
27885	7590	03/23/2004	EXAMINER	
FAY, SHARPE, FAGAN, MINNICH & MCKEE, LLP 1100 SUPERIOR AVENUE, SEVENTH FLOOR CLEVELAND, OH 44114			IP, SIKYIN	
			ART UNIT	PAPER NUMBER
			1742	

DATE MAILED: 03/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/056,667	HWANG, JENNIE S.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sikyln Ip	1742	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 December 2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 10-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

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## DETAILED ACTION

### Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-4 and 16-18 are rejected under 35 U.S.C. ' 103 as being unpatentable over USP 4879096 to Naton (abstract, PTO-1449).

Claims 1-4, 10, 16-18, and 20 are rejected under 35 U.S.C. ' 103 as being unpatentable over USP 5520752 to Lucey (claim 1, PTO-1449).

Claims 1-2, 5, 10-13, 19, and 20 are rejected under 35 U.S.C. ' 103 as being unpatentable over USP 5766776 to Buresch (claim 6).

Claims 1-2 and 10-11 are rejected under 35 U.S.C. ' 103 as being unpatentable over JP 02179388 (abstract), JP 06269981 (abstract), JP 06269983 (abstract), or JP 06269982 (abstract).

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Claims 1-2 and 20 are rejected under 35 U.S.C. ' 103 as being unpatentable over JP 07284983 (abstract) or JP 08001372 (abstract).

Claims 1-6, 10-11, and 14-20 are rejected under 35 U.S.C. ' 103 as being unpatentable over JP 2000061685 (abstract).

Claims 1-2 and 14-18 are rejected under 35 U.S.C. ' 103 as being unpatentable over JP 08206874 (abstract).

Claims 1-2, 14, 15, and 19-20 are rejected under 35 U.S.C. ' 103 as being unpatentable over WO 9534401 (abstract).

Claims 1-3 and 16-18 are rejected under 35 U.S.C. ' 103 as being unpatentable over JP 08132277 (abstract).

Claims 1-5 and 14 are rejected under 35 U.S.C. ' 103 as being unpatentable over JP 11077368 (abstract).

The cited reference(s) disclose(s) the features including the claimed solder compositions. An obviousness rejection based on similarity in chemical structure and function entails the motivation of one skilled in the art to make a claimed compound, in the expectation that compounds similar in structure will have similar properties. In re Gyurik, 596 F.2d 1012, 1018, 201 USPQ 552, 557 (CCPA 1979); See In re May, 574 F.2d 1082, 1094, 197 USPQ 601, 611 (CCPA 1978) and In re Hoch, 57 CCPA 1292, 1296, 428 F.2d 1341, 1344, 166 USPQ 406, 409 (1970). Therefore, it would have been obvious to one of ordinary skill in the art to select any portion of range, including the claimed range, from the broader range disclosed in a prior art reference because the prior art reference finds that the prior art composition in the entire disclosed range has a suitable utility. Also see MPEP § 2131.03 and § 2123.

Cited references are silent about the limitation as set forth in claim 18. However, the instant solder compositions are overlapped by the cited references; consequently,

the properties as recited in the instant claims would have inherently possessed by the teachings of the cited references. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. In re Spade, 911 F.2d 705, 708, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990) and In re Best, 195 USPQ, 430 and MPEP § 2112.01.

“Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). >When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not. In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977).”

### ***Response to Arguments***

Applicant's arguments filed December 18, 2003 have been fully considered but they are not persuasive.

Applicants' argument as set forth in page 6 of the instant remarks is noted. But, none of the instant claims except claim 2 disclosed any recited properties. Moreover, the liquidus temperature in instant claim 2 is taught by abstract of JP 11077368, for example.

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Applicants' case law cited in page 7, first full paragraph is correct that the recitation of "consisting essentially of" limits the scope of a claim to the specified ingredients and those that do not materially affect the basic and novel characteristics of a composition. But, when applicant contends that modifying components in the reference composition are excluded by the recitation of "consisting essentially of" applicant has the burden of showing the basic and novel characteristic of his/her composition - i.e. a showing that the introduction of these components would materially change the characteristics of applicant's composition. In re De Lajarte, 337 F 2d 870, 143 USPQ 256 (CCPA 1964) and Ex parte Davis, et al., 80 USPQ 448, 450 (PTO Bd. App. 1948). There is no factual evidence to substantiate applicants' position. Mere argument or conclusory statements in the specification is not sufficient. In re Geisler (CA FC) 43 USPQ2d 1362 (7/7/1997).

Applicants' argument in page 7 is noted. But, the listed alloys are in Markush Format which does not require reference to disclose every listed alloy. Alloy of Naton in abstract overlaps the Groups i and vii in instant claim 1.

Applicants' argument in page 8, item B of instant remarks is noted. But, Lucey is rejected instant claims as recited above in the 35 USC § 103 rejection. With respect to the applicants' additional alloying elements argument, Examiner reiterates the response as set forth above that applicants fail to provide factual evidence that the additional alloying elements from cited references are detrimental.

Applicants' argument in instant remarks items C-I is noted. Examiner reiterates the same responses as set forth above under "**Response to Arguments**".

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Applicants' argument in item K, page 15 of the instant remarks is noted. But, mere argument or conclusory statements in the specification is not sufficient. In re Geisler (CA FC) 43 USPQ2d 1362 (7/7/1997). Unexpected results have not been shown by the instant specification because which fail to compare the claimed subject matter with the closest prior art. In re Burckel, 201 USPQ 67, In re Baxter Travenol Labs., 952 F.2d 388, 392, 21 USPQ2d 1281, 1285 (Fed. Cir. 1991), and In re De Blauwe, 736 F.2d 699, 705, 222 USPQ 191, 196 (Fed. Cir. 1984). Comparison must be done under identical condition except for the novel features of the invention. In re Brown, 173 USPQ 685 and In re Chapman, 148 USPQ 711. The showing of unexpected results must be occurred over the entire claimed range. In re Clemens, 622 F.2d 1029, 206 USPQ 289, 296 (CCPA 1980). The scope of the showing must be commensurate with the scope of the claims. In re Tiffin, 448 F.2d 791, 792 (Fed. Cir. 1971), In re Coleman, 205 USPQ 1172, In re Grasselli, 713 F.2d 731, 743, 218 USPQ 769, 778 (Fed. Cir. 1983), and In re Greenfield, 197 USPQ 227.

## Conclusion

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

The above rejection relies on the reference(s) for all the teachings expressed in the text(s) of the references and/or one of ordinary skill in the metallurgical art would have reasonably understood or implied from the text(s) of the reference(s). To emphasize certain aspect(s) of the prior art, only specific portion(s) of the text(s) have been pointed out. Each reference as a whole should be reviewed in responding to the rejection, since other sections of the same reference and/or various combination of the cited references may be relied on in future rejection(s) in view of amendment(s).

All recited limitations in the instant claims have been met by the rejections as set forth above.

Applicant is reminded that when amendment and/or revision is required, applicant should therefore specifically point out the support for any amendments made to the disclosure. See 37 C.F.R. § 1.121.

#### Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S. Ip  
March 19, 2004

  
**SIKYIN IP**  
**PRIMARY EXAMINER**